

Title (en)  
POLYNUCLEOTIDE VACCINES AND METHODS OF USING THE SAME

Title (de)  
POLYNUKLEOTIDIMPFSTOFFE UND VERFAHREN ZUR VERWENDUNG DAVON

Title (fr)  
VACCINS POLYNUCLÉOTIDIQUES ET LEURS MÉTHODES D'UTILISATION

Publication  
**EP 4221739 A1 20230809 (EN)**

Application  
**EP 21876646 A 20211002**

Priority  
• US 202063087118 P 20201002  
• US 2021053275 W 20211002

Abstract (en)  
[origin: WO2022072910A1] Disclosed herein are polynucleotides comprising a first nucleic acid encoding a first pathogen antigen and, optionally, a second nucleic acid encoding a second pathogen antigen, and, optionally, a nucleic acid encoding an immune modifier. In some aspects, the first pathogen antigen is a SARS-CoV-2 spike protein or antigenic fragment thereof. In some aspects, the second pathogen antigen is a SARS-CoV-2 protein or an antigenic fragment thereof. In some aspects, polynucleotide includes two or more different immune modifiers. Also disclosed herein are vectors, compositions, pharmaceutical compositions, vaccines, lyophilized compositions, and cells comprising such polynucleotides. Methods of production and therapeutic use are also disclosed herein.

IPC 8 full level  
**A61K 38/19** (2006.01); **A61K 39/12** (2006.01); **C12N 15/11** (2006.01)

CPC (source: EP KR)  
**A61K 39/12** (2013.01 - EP); **A61K 39/215** (2013.01 - KR); **A61P 31/14** (2018.01 - KR); **C07K 14/005** (2013.01 - KR); **C07K 14/5434** (2013.01 - KR); **C07K 14/5443** (2013.01 - KR); **A61K 2039/53** (2013.01 - EP KR); **A61K 2039/55538** (2013.01 - EP KR); **A61K 2039/55555** (2013.01 - EP KR); **A61K 2039/70** (2013.01 - KR); **C12N 2770/20022** (2013.01 - KR); **C12N 2770/20034** (2013.01 - EP KR); **C12N 2830/48** (2013.01 - KR); **C12N 2830/50** (2013.01 - KR); **C12N 2840/203** (2013.01 - KR); **Y02A 50/30** (2018.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2022072910 A1 20220407**; AU 2021355496 A1 20230518; CA 3197650 A1 20220407; CN 116916949 A 20231020; EP 4221739 A1 20230809; JP 2023545009 A 20231026; KR 20230127977 A 20230901

DOCDB simple family (application)  
**US 2021053275 W 20211002**; AU 2021355496 A 20211002; CA 3197650 A 20211002; CN 202180081155 A 20211002; EP 21876646 A 20211002; JP 2023520312 A 20211002; KR 20237014741 A 20211002